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Planning in the Portland Metropolitan Area after Measure 37

Ted Reid

2005/06 George Russill Fellowship

Institute of Portland Metropolitan Studies

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“The only purpose for which power can be rightfully exercised over any member of a civilized community, against his will, is to prevent harm to others. His own good, either physical or moral, is not a sufficient warrant. He cannot rightfully be compelled to do or forbear because it will be better for him to do so, because it will make him happier, because, in the opinion of others, to do so would be wise or even right... The only part of the conduct of anyone for which he is amenable to society is that which concerns others.”

- John Stuart Mill (1859)

Background on the Russill Fellowship:

Created in the aftermath of Measure 37, the Russill Fellowship is aimed at examining non-regulatory land use planning tools and their potential application in the Portland Metropolitan area, with a particular emphasis on habitat conservation. The above-mentioned ballot initiative and the larger private property rights movement have given an indication that Oregon voters perceive inequities in the State's land use planning system. It is also clear that Oregonians still place a high value on the conservation of our state's natural resources. According to a March, 2005 statewide survey, protecting farmland for farming is very important to 67% of respondents, protecting the environment is very important to 61%, and protecting wildlife habitat is very important to 58% (CFM Research, 2005). According to a more recent survey commissioned by Metro, 72% of respondents indicated that a policy to "add houses in existing neighborhoods" comes closer to how they feel while only 16% chose "convert farm and forest land for growth" (12% responded with "don't know") (Davis, Hibbits, & Midghall, Inc., 2006).

Regardless of the legal status of Measure 37 or any future regulatory takings initiatives, the planner's toolbox needs to be expanded, providing a wider variety of options to accomplish the Statewide Planning Goals. However, as the research for this paper progressed, a more complicated picture of planning and the use of regulations has emerged. It has become clear that non-regulatory planning instruments are no substitute for regulation in upholding Oregon's Statewide Planning Goals. The above-cited survey indicates that Oregonians do still see the importance of the Goals. Thus, this paper has focused on the need for long-range planning, the relationship between planning and property values, the threat of sprawl in the Portland region, planning instruments that help to control such sprawl, and whether such instruments are able to attain Oregon's Statewide Planning Goals.

The need for a long-range vision in land use planning:

The phenomenon of the “tragedy of the commons” is unfortunately all too familiar in natural resource management (Hardin, 1968). Despite the long-term benefits of cooperating to preserve the shared environment, individuals typically make choices that seek to maximize their short-term gains, resulting in harms to the shared environment. This problem is not only to be found on publicly held lands (the commons); one only need look at the disregard with which private lands have been contaminated to see that private land ownership is not always the cure to the problem. As Jacobs puts it, “...we disagree about property rights and land, in part, because we disagree about the economics of land, especially what motivates individual land users and how they respond to the signals they receive from the economic, political, social, and cultural systems within which they live” (Jacobs, 1999).

Unfortunately, the repercussions of an individual’s land use choices do not start and stop at the property boundary. This, in essence, is what is behind the real estate mantra of “location, location, location.” That is to say, the value, both monetary and as habitat, of one’s land is largely dependent on the land use decisions being made by neighbors and public agencies.

Many of the most important land use decisions are being made on private lands. Attempts at identifying habitat conservation needs throughout the United States have indicated that 15% to 30% of land should be held in some form of conservation status in order to preserve biodiversity. Approximately half of that land is in private ownership (Defenders of Wildlife 2002). Unlike land in public ownership, the use of private land is, to some degree, determined by the individual owner. Unfortunately, actions on private and public lands alike can have negative impacts that extend beyond the property lines. A clearer understanding of the impacts of land-use decisions that transcend property boundaries is necessary.

As Tideman (1990) points out, Pareto improvements in which an action makes at least one person better off and no one worse off are the “Holy Grail for economists.” Tideman summarizes this as it applies to land use decisions by stating “...for any activity that a person might undertake at any site, if the net benefit to all persons at all other sites were positive, there would be a subsidy of that magnitude for the activity...” As a corollary, “...if the net benefit to all persons at all other sites were negative, there would be a tax on the magnitude of the activity.” Of course, what is difficult here is determining what actions are positive and which are negative, measuring the degree of the magnitude, and ascribing a monetary value to it. That said, the underlying point is that such decisions carry trans-boundary effects.

Land-use regulation and private land values:

The determination of property value is not simply a product of the land use decisions being made by neighboring property owners. Many factors, including regulations, affect value. These effects are the background against which Measure 37 passed. Unfortunately, the discussion of these impacts has been drastically over-simplified and has focused on diminished property values with little mention of the tremendous amount of private land value attributable to regulation and planning. An exploration of both the negative and positive impacts of regulations on property values adds nuance to this discussion. Regulations frequently result in higher property values through their amenity and scarcity effects (Jaeger 2006; Brueckner 1990).

Land use regulations have an amenity effect on values by protecting or enhancing a property and its neighbors. Protection of a property may take the form of prohibiting conflicting land uses, managing urban growth, or controlling pollution and congestion (Carruthers 2002; Byun & Esparza 2005). Enhancement of a property may result from the provision of roads, sewer and water service, parks, schools, etc. These protections and enhancements that constitute the amenity effect are typically the result of public investments that are funded through property

taxes. In this case, the property tax itself imposes a cost, but the net benefits to private land owners drastically outweigh those costs. Without such services, a property's value is limited.

Jaeger draws attention to the legal concept of “average reciprocity of advantage” which has been used as a justification for denying compensation in some regulatory takings claims (the taking of private property for public purposes without just compensation as described in the 5th and 14th Amendments to the U.S. Constitution). In essence, the concept can be explained as follows: “While each of us is burdened somewhat by such restrictions, we, in turn, benefit greatly from the restrictions that are placed on others.” (Keystone Bituminous Coal Ass’n v. DeBenedictis, 480 U.S. 470, 491 (1987) as quoted in Jaeger, 2006). This benefit is not simply an abstract concept, but translates into higher property values that are the result of land use regulations.

Regulations also have a scarcity effect on property values; by limiting potential uses of properties in a particular location, regulations reduce the supply of available lands for any given use, thus increasing the value of those lands where the use is allowed. Because this scarcity effect is more indirect, its benefits are less obvious to property owners. For instance, the exclusive farm use (EFU) designation used to preserve agricultural lands in the Willamette Valley has the effect of constraining the supply of developable lands, thereby increasing the value of lands not designated EFU.

It would be wrong, however, to conclude that owners of EFU lands are bearing the burden of propping up the property values of others. Farming, like many industries, benefits from agglomeration and economies of scale. The presence of other farms supports necessary farm services such as suppliers, transport networks, and processors (Jaeger, 2006). EFU zoning encourages such economies of scale by limiting conflicting uses such as residential development (conflicts may arise over noise, odors, traffic, dust, etc.).

In their study of lands zoned exclusive agricultural use in Wisconsin, Henneberry and Barrows (1990) reached the conclusion that such zoning may have a negative or positive effect

depending on individual site characteristics. Such regulations are typically positively capitalized into land values for large contiguous blocks of farmland which are more distant from urban areas. Conversely, agricultural zoning is negatively capitalized into land prices for smaller blocks of lands that are closer to urban areas. Rather than zoning, it would seem that the more important determinant of value is the proximity of urban land uses and the size of the agricultural parcels. These factors diminish the afore-mentioned economies of scale that may make agriculture more profitable.

Though regulations frequently have positive effects, in some cases they may reduce property values. According to Jaeger, this may occur under several circumstances. Firstly, if the amenity effects of a regulation are not sufficiently valued by the market and thus not reflected in consumers' willingness to pay for such lands, there may be a reduction in price.

Secondly, if a regulation produces an over-supply of lands dedicated to a particular purpose (for example, too many lands are zoned industrial), diminished values will be reflected in the market's willingness to pay for such lands. There is thus an onus on planners to carefully consider market demand when applying zoning designations.

A third situation under which regulations may decrease property values is when the regulation benefits society, but that benefit is not sufficiently reflected in the value of those properties subject to the regulation. This is essentially the free-rider problem that affects public goods, whereby there is no need for individuals to pay for the public good as they may benefit from it without such payment.

A fourth circumstance where property values may be diminished due to regulations is more difficult to describe in classical economic terms. Here, there may be, for instance, a personal desire to subdivide timber lands to provide buildable lots for family members. The

personal attachment to the property makes it difficult to determine value based on comparable sales (Jaeger, 2006).

Finally, Jaeger points out that the land market is ever-changing and that profitable uses of a property may change over time. A land use regulation that was not an impediment to profits at the time of its enactment may become one as new opportunities present themselves. Under Measure 37, government agencies are put in the untenable position of having to anticipate future market conditions when instituting regulations.

To further complicate these issues of the effects of regulations on land values, it should be noted that the exemption of a single property from regulation will almost inevitably increase that property's value. This increase is likely to occur regardless of whether the regulation originally had a positive or negative impact on the property's value. The increased value would not exist, however, if exemptions to the regulation were handed out to everyone. It is the amenity and scarcity effects created by regulations on surrounding lands that would make an exemption valuable to a particular property. For instance, an exemption from an EFU designation would increase a property's value because that property is surrounded by beautiful farm land still subject to regulations. The exempted land also benefits from the fact that is a scarce developable property.

The diminution of value attributable to a regulation is frequently confused with the value of the land in the absence of the regulation. As Jaeger puts it, "...an appraiser's estimate that a property's value would rise if a given land-use regulation were removed tells us nothing definitive about whether the land-use regulation reduced the property's value." These complex interactions between market forces and regulations deserve greater attention and are at the core

of this paper. Given the perceived inequities of our current planning system, a more nuanced conversation should be encouraged.

The need for planning at regional and state levels

The effects of land use decisions may be seen not only on neighboring properties, but on neighboring jurisdictions. The spatial patterns of urban growth are largely shaped by three major public policy tools: land use regulations such as urban growth boundaries, the provision of urban infrastructure (streets, sewers, etc.), and open space protection (Fulton et al, 2006). Because urban growth management has extra-local implications it is unlikely that any one of these three tools would sufficiently control sprawl on its own; limiting growth in one jurisdiction may simply encourage sprawl elsewhere.

The multiple benefits of growth management must be made explicit. Though important, the preservation of prime agricultural lands cannot be the sole goal. Such a single purpose will prove politically insufficient in the long-term (Richmond, 2000); the goals must be, more broadly, about making Portland more livable, lowering property taxes (which have subsidized sprawl), improving air and water quality, and minimizing disparities between rich suburbs and impoverished inner cities (Carruthers, 2002). We all stand to benefit from a thoughtful approach to urban growth.

Managing such growth at the regional or statewide level holds greater promise for minimizing the impacts of sprawl (Bollens 1992; Byunn & Esparza 2005). An urban growth boundary without a mandate at the regional or, preferably, statewide level will not perform properly in limiting sprawl. A growth management mandate at the regional or state level not only creates the regionally agreed upon boundary, but prohibits development outside of the boundary, thereby slowing the conversion of vacant land to urban uses (Downs, 2005; Richmond, 2000).

Anthony's study of state growth management regulations found that the success of such programs varied from state to state. This is attributable to variations in the details of the programs and their strength at statewide and local levels (2004). Georgia is an example of a state with a growth management program that has been largely unsuccessful in controlling sprawl. Georgia's decrease in population densities from 1982 until 1997 is possibly attributable to the fact that the region, not the state, has primary authority over growth management, thereby constraining the effectiveness of the program.

Other growth management states, particularly Washington, have seen greater success in controlling sprawl. Despite the fact that Washington had a 49% increase in urban land between 1982 and 1997, population densities increased by 1.5%. Anthony points out several potential reasons for Washington's success in increasing densities. Its program focuses on fast-growing counties rather than applying strict regulations to all counties. These fast-growing counties are required to closely follow local comprehensive plans and are allowed to allocate up to .5% of real estate transfer taxes for funding capital improvements. There is thus an incentive that accompanies the regulation.

According to Anthony (2004), Oregon has witnessed a 32.11% increase in urban lands from 1982 until 1997. This is, in and of itself, not necessarily problematic. Our statewide growth management program has no intention to stop growth, but rather to slow it down and make more efficient use of lands currently within urban growth boundaries before expanding. Population density is a good measure of the efficiency of the conversion of rural land to urban use. Unfortunately, Oregon has seen a decrease, albeit small at -2.02%, in population densities during the years 1982 to 1997. This is compared with an average decrease in population density of -15.77% for states without growth management regulations (Anthony, 2004).

The control of urban sprawl is at the heart of this paper's discussion for it is sprawl that poses the greatest threat to the Portland metropolitan region's agricultural lands and natural areas as well as the livability of the city. Furthermore, it provides a fairly concise illustration of the benefits of planning and the costs of not doing so. Beyond sprawl's impacts on the landscape, it is becoming clear that there are substantially higher infrastructure costs associated with a sprawling urban layout (Carruthers, 2002). This is particularly the case for services such as roads, water, and sewers. Speir and Stephenson (2002) identify the larger lot sizes and greater distance to existing service centers that are typical of sprawl as the factors which have the greatest impact on water and sewage costs. An increase in lot size from .25 to 1 acre nearly doubles the costs of providing water service. Unfortunately, these costs are not fully borne by the developers and passed on to home buyers. Rather, existing tax payers subsidize wasteful growth patterns, raising issues of equity (Carruthers, 2002).

Further difficulties mark the pricing and timing of infrastructure provision. Ideally, infrastructure would be priced at marginal cost (Knaap et al 2001), that is, the cost of providing the extra unit of infrastructure. Doing so would reflect the true costs of new development. Given the economies of scale associated with infrastructure such as roads and sewers, it is typically not possible to increase capacity as needed without large investments and is thus not practical to determine marginal costs. Thus, infrastructure is priced at long-run average cost (total cost divided by total payers), resulting in sprawling urban growth (Knaap et al 2001). Given this shortcoming, other land use planning instruments must accompany the provision of infrastructure in order to ensure the efficient use of land and public services (Knaap et al 2001).

In order to better coordinate development and the provision of infrastructure, the state of Florida, as a part of its 1985 Growth Management Act, enacted a policy of concurrency requiring

that appropriate infrastructure be in place at the time of new developments. The policy has had mixed results. On the positive side, concurrency provides a linkage between planning and implementation. Unfortunately, the result has been reluctance on the part of legislators to make key decisions on infrastructure for lack of funding sources. Local bureaucracies have implemented concurrency, but with frequently ambiguous and inconsistent practices in order to maintain its political feasibility (Ben-Zadok and Gale, 2001).

Federal policies that encourage sprawl

It is worth noting that any argument that the free-market knows best when it comes to where and when to develop is drastically over-simplified. Beyond the above-mentioned allocation of the costs of sprawl, the Federal government has a number of policies that have undermined small scale agriculture and led to the over-valuation of urban lands. These policies include massive investments in highways and other infrastructure, Federal Housing Administration mortgage guarantees, and income tax policies that allow for the deduction of mortgage interest and property taxes (Jackson, 2000). While these policies have done much to bring prosperity to the United States, it has been at the expense of long-term environmental health. Any discussion of regulation's negative impacts on property values must also acknowledge these policies that have inflated values and encouraged unsustainable urban sprawl.

Oregon's Measure 37 has forced a reassessment of the regulations that form the backbone of Oregon's statewide planning system. It is the purpose of this paper to look specifically at the economic and societal motives for controlling sprawl and conserving ecosystems in the Portland metropolitan region, with a particular emphasis on how society may share the benefits and burdens of regulation. This is with the recognition that regulation plays an important role in the function of such land use planning tools. It will also be the purpose of this paper to identify the

characteristics of a “good” land use planning tool with particular attention paid to the issues of equity (who pays and who benefits).

The grey area between regulatory and non-regulatory land use planning tools:

A review of existing land use planning tools quickly leads one to the conclusion that most such tools are neither purely regulatory, nor purely non-regulatory. Most conservation mechanisms that are regarded as being non-regulatory have, on some level, a regulatory component that allows them to function. The fuzzy distinction between regulatory and non-regulatory approaches shows up in programs like carbon banking that attempt to ascribe a market value to conservation activities. While a polluting firm is not explicitly compelled to offset carbon dioxide emissions, the company may find that, in light of regulations that limit emissions, purchasing carbon credits makes more economic sense than investing in new technology to cut emissions. Similarly transferable development rights (TDR) programs, typically regarded as being a market approach to conservation, will not function absent regulations limiting development in the area to be conserved. Without such regulation, it is entirely up to the private landowner to decide whether to develop their property or sell their development credits. Similarly, it is zoning regulations that create the framework and, ideally, the demand for transferring development credits in the area to be developed at increased density (the “receiving” area).

Thus, it appears to be the case that land use planning tools fall into four broad categories with frequent overlap and hybridization:

1. Pure regulation – In this category are, for example, urban growth boundaries, classical Euclidean zoning, building codes, and federal regulations such as the Endangered Species Act (ESA). While not technically a land use planning tool, the ESA has profound implications for the management of both public and private

lands in the United States. In mandating that listed species will be protected regardless of costs, the ESA sets a fairly rigid standard for how lands may be used.¹

2. Mitigation – Included here are many of the market-based strategies for mitigating pollution or the adverse effects of development: transferable development rights, mitigation banks, development impact fees, carbon banking, and tradable pollution permits. In essence, these mechanisms attempt to attach market values to public goods such as ecosystem services and clean air. The decision to comply with a regulation or to purchase an exemption is up to the individual.
3. Subsidies and Incentives – Included here are programs in which government agencies use incentives or subsidies to encourage private landowners to manage their properties according to standards which would otherwise not be required. An example of such a program is the USDA's Conservation Reserve Program.
4. Purely voluntary programs – This category includes land use planning tools such as the government purchase of lands from willing sellers, purchase of conservation easements from willing sellers, and government-sponsored education programs to encourage, but not require, good stewardship practices.

Many land use planning tools have elements from several of these categories. This is perhaps a reflection of the growing consensus that in order for conservation efforts to achieve long-term success, there needs to be a regulatory component, an economic incentive, and an underlying societal environmental ethic. (Uphoff and Lanholz, 1998; Shogren 2005) Each of these components needs to be reinforced by the other two. The application of these three

¹ The rigidity of the ESA has been tempered with the increased popularity of Habitat Conservation Plans in meeting ESA requirements. HCP's allow for the incidental taking of a species if the HCP produces a net positive effect on the species.

components results in a spectrum of conservation activities. Some programs have a strong regulatory component and some have a strong voluntary component, but nearly all are a hybrid of the two. In all cases, the development of a widely accepted environmental ethic is essential for a program's long-term success.

Mitigation:

The attachment of market values to ecosystem services is the basis for land use planning tools that allow for the purchase of exemption from regulations. Daily posits that an ecosystem service contains all "...the conditions and processes through which natural ecosystems, and the species that make them up, sustain and fulfill human life" (Daily, 1997). Forests, for instance, perform a variety of such services such as reducing erosion, moderating heat gain during summer, and absorbing carbon dioxide, a greenhouse gas linked with global warming. Similarly, wetlands filter water and serve as a buffer in floodplains. Absent these natural processes, we are faced with the need for relatively expensive engineered solutions such as water filtration plants. Beyond the pragmatic arguments for ecosystem services, most people recognize nature's intrinsic value. The challenge is to develop a formal system of compensating landowners for the non-market benefits of preserving their land's natural assets (Daily and Ellison 2002).

As a public good, intact ecosystems suffer from the free-rider problem. That is to say, individuals may receive the benefits of intact ecosystems in their state or region, but may face no need to pay for this benefit. Value is typically defined in the context of supply and demand for a good or a service. It can be defined as a consumer's willingness to pay or the minimum amount an individual would require to give up a good or service. Absent the need to pay for a public good, the determination of that public good's value becomes difficult.

An altruistic land owner may have the luxury of conserving their property without regard for the opportunity costs of doing so. These opportunity costs may include foregone profits from

subdividing the property and selling off the lots or harvesting the property's timber. Given that there are carrying costs such as taxes and mortgage payments associated with land ownership, the landowner typically has a need to find profitable uses for the land.

Carbon Sequestration:

One example of an ecosystem service is the sequestration of carbon dioxide that is performed by trees during photosynthesis. A forest kept in its natural state acts as a carbon bank and its owner may receive payments for its carbon credits. These payments come from firms who are required to offset their carbon dioxide emissions. Similar programs could be set up for other ecosystem services. The complication is in determining the allocation of credits. There must also be a regulatory component that compels firms to purchase these credits. The Climate Trust, a Portland non-profit, is actively engaged in carbon offset programs. Similarly the Chicago Climate Exchange is a legally-binding greenhouse gas trading system. Offset sites (those sites that are left in a forested state) could be established in the Portland metropolitan region to provide a market mechanism for compensating forest owners that provide a public good. Carbon sequestration programs, though promising, are not able to function on a strategic, landscape-wide basis because there is nothing compelling a forest owner to set up such a bank.

Mitigation or Conservation Banking:

Similar in concept to a carbon bank, the owner of significant habitat can, using a habitat or species inventory of their land, sell credits to developers whose projects negatively impact that particular type of habitat or species. As with a carbon bank, this requires a regulatory component to mandate mitigation, to affirm the bank's credits, and to set the number of credits needed to mitigate a particular development project. The mitigation bank land needs to be conserved in perpetuity, utilizing a conservation easement. Early forms of conservation banks were completed on a case by case basis at the site of the new development. Resulting in fragmented

habitats, these early conservation banks frequently lacked long-range management plans (Parkhurst and Shogren 2005). In their more recent form, conservation banks are set up in advance of any development in anticipation of a demand for mitigation credits. Such banks are able to capitalize on economies of scale, thereby conserving larger blocks of contiguous habitat. In this way, conservation bank owners are compensated for their provision of a public good and developers are given a degree of flexibility in meeting the goals of regulations.

Stormwater Credit Market

The impermeable surfaces that accompany urban development create a need for handling stormwater runoff. As stormwater flows across these surfaces, it picks up pollutants that are then carried into the region's rivers and creeks. With 80 to 100 billion gallons of precipitation per year, Portland's costs of handling this runoff are substantial (Portland Bureau of Environmental Services, 2006). Recent best management practices attempt to minimize these costs through on-site management of stormwater, thus lessening the demand on the sewage system. The Portland Bureau of Environmental Services is investigating the possibility of a private market for stormwater management services which may be achieved through relatively low-tech means such as vegetated swales, porous pavers, and eco-roofs. Integrating stormwater management into the built environment is potentially less expensive than sewage systems and typically also has aesthetic benefits. It is likely that any such market for stormwater credits will focus around the maintenance of lands in their natural state, thus providing a source of revenue for land conservation. Credits would be purchased by developers for whom on-site stormwater management is not possible.

Transferable development rights:

Transferable development rights (TDR) are based on the severability of the bundle of rights associated with a property. A TDR program is initiated in order to discourage

development in a prescribed area of private land ownership. This area which has been selected for its ecosystem value is called the “sending area” because development rights are “sent” and extinguished by means of sale. A “receiving” area is also designated. Owners of land in the receiving area are able to purchase development rights from the sending area and by doing so are permitted to build at higher density than would otherwise be allowable under the applicable zoning designation.

In principle, a TDR program sounds like a perfect market solution to a conservation problem; habitats are conserved using a free market mechanism and greater urban densities are achieved. Unfortunately, successful implementation of a TDR program can be complicated and they have frequently failed altogether. Problems typically arise in the designation of the receiving area (where higher density development is desired) and predicting what the demand for higher density will be (Machemer & Kaplowitz 2002). This demand is contingent upon the receiving area having a lower base density zoning than demanded by the market. A TDR program that fails to function will lead to the receiving area being built at lower density than desired.

In order to avoid creating such an undesirably low-density development pattern, the cost of buying development credits must not exceed the cost of developing outside of the receiving area (unless developers are willing to pay the extra cost because of the location of the receiving area). The value of the development right must reflect both the development potential of the sending area and what a developer in the receiving area would pay to build an additional unit. Though the government does not determine the value of development credits, it does determine how many credits are allocated to each sending area property, how large the sending area is, and the size and location of the receiving area. Additionally the government may act as an exchange

bank for credits and must monitor sending area properties whose development rights have been sold to ensure compliance with any land use restrictions.

TDR programs have often failed because there were no bans on development in the sending (conservation) area (Mittra 1996; Machemer & Kaplowitz 2002). Absent such a restriction, the landowner may ultimately decide to build on their property regardless of whether or not fair market value is being offered for the development right. Thus, a TDR program will not function in the absence of regulations, so calling it a non-regulatory tool is not completely accurate. What it can achieve is greater equity. However, it does not necessarily avoid claims of regulatory takings on the sending properties if sending area owners don't view the ability to sell credits as just compensation for the regulation. Furthermore, the legality of a TDR program may be challenged by a receiving area developer on the grounds that the need to purchase a development credit represents an unconstitutional exaction (Parkhurst and Shogren 2005).

Mittra identifies the geographic proximity of the sending and receiving areas as another factor that determines the success of a TDR program. The two areas must be close enough that both recognize the benefits of the TDR program. If the sending area is too distant from the receiving area, a negative public sentiment may arise in the receiving area which is witnessing increased densities, but not seeing the conservation benefits (Mittra, 1996). Similarly, the receiving area must have sufficient infrastructure and public services to accommodate the increased density being achieved through the TDR program.

Application of a TDR program in the Portland metropolitan area:

There currently are TDR programs in Portland that are concerned with the preservation of historic properties. However, there is not a significant TDR program aimed at conservation of habitat and farmland. The feasibility of a large scale TDR program in Portland will be

dependent upon the afore-mentioned conditions as well as determining what effects the urban growth boundary would have on any such program.

Under its newly adopted Nature in Neighborhoods initiative (Metro's attempt to be in compliance with Statewide Planning Goal 5), Metro has drafted a model ordinance that may be adopted by local governments. This model ordinance and the Regional Framework Plan enable localities to initiate TDR programs. However, there does not seem to be an interest on the part of Metro to run a region-wide TDR program. The feasibility of a local jurisdiction's TDR program would perhaps be increased by the need to have geographic proximity of sending and receiving areas. However, in a city-run TDR, there would seem to be a greater possibility that a developer would simply turn their attention to a locality without a TDR program.

Some factors that need to be explored in order to determine the feasibility of a local TDR program would be:

- Sending area
 - What are the regional conservation priorities?
 - Is development outlawed or substantially limited in the sending area?
 - Is there a compelling reason to use a TDR program rather than simply rely on existing development restrictions? Is this reason one of equity? Is there a threat of a Measure 37 claim?
 - Does the value of the development right constitute a great enough percentage of the fair market value of the total property that fee title purchase makes more sense than a TDR program (given the complications of TDRs and the public access that would result from fee title purchase)? If the development right has substantial

value relative to the total property value, it would also suggest that current regulations are insufficient to limit development.

- Receiving area
 - Are the potential receiving areas proximate to the sending area?
 - Is base zoning density in the receiving area lower than is desirable?
 - Can the receiving area accommodate more development than there are credits available? Mittra (1996) suggests twice as much development capacity as credits available to create sufficient demand?
 - Will the urban growth boundary serve to increase demand for higher density development in the receiving area?
 - Will the value of the development credit to the receiving area developer be greater than or equal to the value of the credit to the owner of the sending area property?
 - Will the locality be able to afford the planning, infrastructure, and service costs necessitated by higher density in the receiving area?
 - Is higher density politically feasible? Is it palatable to existing landowners in the receiving area?

Given the complexity of TDR programs, it may be worth exploring a more straightforward means of conservation such as fee title or conservation easement purchase, charging higher development impact fees, conservation banking, or the purchase of development rights. This is particularly true given that a TDR program may effectively act as a tax on increased urban densities (higher urban densities being a desired outcome of Metro's efforts).

Windfalls Tax:

Related to the previous discussion of regulation's potentially positive effects on land values is the concept of windfalls. Inclusion of a private property in the Urban Growth

Boundary (UGB) confers upon the landowner the ability to develop their property at high densities. Without such inclusion, a property owner's use of the land is limited by the under-provision of urban infrastructure such as schools, sewer, water, transit, and roads and is constrained by low-density zoning. Consequently, properties within the UGB carry a premium value that reflects development potential and the provision of urban infrastructure. This premium value is sometimes referred to as an unearned increment or "windfall" as it arises through no improvements made by the private landowner. Through annexation into the UGB and the public provision of capital improvements, private land values are drastically increased. This unearned increment is also apparent in lands immediately outside the UGB which carry a speculative value that reflects anticipated annexation.

Metro's estimates of how land values are affected by the UGB are summarized below. The data is based on the assumption that the acre of land within the UGB would be zoned single family detached with a density of Metro's average of 6.5 units per acre (5,000 sq. ft. lots): "Data for Exhibit A are taken from 2004 and 2005 sales of land and homes within 1,250 feet of the UGB. Agricultural value is the average of assessors' land value for agriculturally designated acreages adjacent to the UGB including both farm deferred and non-deferred properties" (quotes and table 1 are from an unpublished Metro proposal outline dated October 20, 2005).

Table 1 - Value Increase Pyramid from Agriculture to SFR Build Out – One Acre at Edge of UGB

Status of Acre	Value per Acre
Agricultural Land at UGB	\$20,000
Raw Land inside UGB	\$208,000
Completed Single Family Residential Lots	\$500,000 - \$650,000
Build out with SFR Homes	\$2,150,000

“Exhibit A indicates that land valued at \$20,000 for agricultural purposes² immediately outside the boundary jumps first to \$208,000 per acre as raw land (with appropriate zoning). Upon subdivision and provision of streets, sidewalks, sewers, water, drainage and payment of system development charges (SDCs), the price per acre with “ready-to-build” lots increases to \$500,000 - \$650,000 per acre. Assuming the 2005 average price home for the area (2,400 sq. ft with 4,900 sq. ft. lot), the built-out acres carry a total value of \$2,150,000 – more than a 100-fold increase over their original agricultural value” (Metro, unpublished proposal outline dated October 20, 2005).

The amenity effects that UGB inclusion and proximity to urban infrastructure has on property values may be demonstrated. In the following analysis of raw land (no buildings) in Multnomah County, OR, I have not used sale data, but have instead relied on assessed values. Though assessed values are lower than market values, they may be used as a rough measure of willingness to pay for proximity to public infrastructure. For the purposes of this analysis, public infrastructure includes schools and hospitals (though no distinction has been made between public and private), parks, libraries, light rail stops, and transit centers. Given that urban infrastructure is so pervasive (one need only look at the extent of road networks for proof), it is difficult to account for all of the private land value created through public investments. However, this analysis hopes to examine some of its effects. Doing so may add some nuance to the discussion of planning’s impacts on private land values. Distances to infrastructure were calculated for each vacant property using a Geographical Information System. The correlations between infrastructure and property values are summarized below in table 2:

² “The \$20,000 per acre value is considerably higher than the value of land for agriculture alone; all property within several miles of the UGB carries a speculative premium that reflects market assessments related to its likelihood of being included within the UGB at some time in the future and its possible use as rural residential property” (October 20, 2005 Metro unpublished proposal).

Table 2 – Correlations between per acre value and distance to infrastructure in Multnomah County, Oregon

		Distance to hospital	Distance to school	Distance to library	Distance to lt. rail stop	Distance to transit center	Distance to Parks	Tax lot acreage
Per Acre Value	Pearson Correlation	-.162(**)	-.098(**)	-.137(**)	-.166(**)	-.136(**)	-.062(**)	-.045(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000
	N	25698	25698	25698	25698	25698	25698	25698

** Correlation is significant at the 0.01 level (2-tailed).

The above results indicate that there is a strong negative correlation between increasing distance to infrastructure and property values. Put more simply, the closer a property is to a light rail stop or a park, the higher the property's value is likely to be. The expansion of Portland's UGB is a viable mechanism for capturing a portion of this value that is attributable to public investments.

Based on the fact that private land value is, in large part, created by public investments, Metro is considering a "Fair Growth and Farmlands" policy which would capture a portion of the increased private land value that results from UGB annexation. Funds collected from the value capture tax would be used to pay for capital improvements and planning within the UGB expansion area as well as paying for regional needs which are indirectly related to UGB expansions (e.g. increased regional mass transit capacity). The revenue would also be used to fund farmland protection through the use of conservation easements. Finally, the funds would provide a pot of money from which to pay valid Measure 37 claims (thus far, regulations have been waived, but no claimant has received compensation). All of these needs are linked to urban growth management and this tax would provide a mechanism for equitable distribution of the benefits and burdens of regional planning.

Subsidies and Incentives

These types of land use planning tools typically involve the government offering an incentive or subsidy for adherence to more stringent land use regulations than would otherwise be required. An example of such a program is the U.S. Department of Agriculture's Conservation Reserve Program (CRP). Under this program, private land owners may receive funding for retiring agricultural lands from production and undertaking specified restoration activities. Oregon's Conservation Reserve Enhancement Program (CREP) is allied with the USDA program. CREP makes a one-time payment of four times the annual rental rate for each streamside acre when 50% of the land along a five mile stretch is enrolled in the USDA Conservation Reserve Program. It is not required that the acreage be contiguous.

Supporters claim that subsidy programs encourage private landowners to view habitat as something positive rather than a potential Endangered Species Act liability (Parkhurst and Shogren 2005). Critics of incentive programs maintain that these funds would be better utilized in purchasing the properties outright. According to Donahue, a purely incentive-based program without a regulatory backbone will ultimately fail because such programs often involve no systematic planning and are characterized by piecemeal efforts. Additionally, funds for such programs are finite and paying for every benefit to threatened species on private land (or compensation for lost development opportunities) is contrary to the development of a land ethic among private landowners (Donahue 2005).

Purely Voluntary Programs

Included here are land use planning tools that involve the public purchase of real property from willing sellers. Such methods offer the public the highest degree of certainty for the

perpetual protection of habitat (or historic landmarks, as the case may be). The greatest obstacle for such programs is the source of funding.

Fee title purchase of lands:

Fee title purchase of lands is perhaps the most straight-forward means of both achieving conservation goals and compensating private landowners. Frequently employed by non-profit land trusts and public agencies alike, the purchase of lands is limited only by financial resources and the willingness of landowners to sell their property. Clearly, the financial limitation is a significant one. Also notable is the reluctance of many counties, particularly in the western U.S. where public lands make up a large portion of the landscape, to have private lands taken off the tax rolls.

Metro has successfully acquired over 8,000 acres since the passage of a 1995 bond initiative. This bond money is now largely spent. Additional land purchases from willing sellers are contingent on additional funding. Two such sources could be the passage of a new bond measure or requesting appropriations from the federal Land and Water Conservation Fund (LWCF).

Conservation easements:

In cases where there is a reluctance to bring land into public ownership, the purchase of conservation easements has proved an effective means of accomplishing conservation objectives while maintaining private ownership. Again, barring the donation of an easement and an endowment to cover perpetual monitoring costs, there is a significant financial outlay involved in the purchase of a conservation easement. The costs of performing habitat inventories and drafting an easement that clearly articulates acceptable stewardship practices are worth considering. In some cases, the costs of fee title purchase and the total costs of a conservation easement may be comparable. That said, conservation easements are particularly effective in

protecting farmlands. Drafted carefully, they can offer perpetual protection to habitat and agricultural uses that is otherwise not possible with zoning restrictions (which may be amended over time). Easements must, however, be monitored in perpetuity in order to ensure compliance and validity. If the easement is not consistently enforced, it may not stand up in court. These monitoring activities require that the holder of the easement be a stable entity with a long-term commitment and financial resources. If Oregon localities are no longer able to rely on zoning restrictions because of the prospect of a Measure 37 claim, conservation easements offer an alternative, albeit an expensive one.

Purchase of development rights (PDR):

In essence, the same as a conservation easement, a PDR program avoids the TDR complications of predicting demand for development credits. Development rights are simply purchased and extinguished without being transferred to a different property. The shortcomings of a PDR program are the same as those of a conservation easement program. A PDR program relies on willing sellers, thereby potentially precluding a landscape-wide approach. Funding may be difficult to secure and the value of the development rights may be a substantial portion of the property's total fair market value. In such a case it may make more sense to pursue fee title purchase, thereby providing complete public control and access to the property.

Rustad (2006) points out a further complication in determining the value of development rights on lands where zoning precludes development (as in the case of EFU zoning in Oregon). EFU zoning would tend to suggest that no development value exists. This may be resolved by the appraiser if it can be determined that a landowner would likely prevail in a Measure 37 claim given the tenure of their land ownership, thereby showing that a development right does exist. This same difficulty would apply to a conservation easement program or a TDR program.

Funding Sources for Public Land Acquisition

Land transfer tax:

An excise tax on all real estate transactions in the Portland area could fund the public acquisition of properties that are conservation priorities. The tax would provide an explicit link between the need to conserve land and allowing for urban growth if it were only assessed on the sale of newly built houses. A real estate transfer tax was recently before voters in Clallam County, WA. This .5% tax was intended to preserve agricultural lands in this rural area of the Olympic Peninsula. A large effort against the tax was undertaken by both the Washington and National Associations of Realtors out of concern that such a tax would have a negative impact on all real estate transactions. Their campaign, “Stop Taxing the American Dream,” maintains that the tax would prevent many from being able to afford a house. The tax only received 41.76% of the vote. Six other Puget Sound counties including King and Snohomish have voted on similar excise taxes; all have failed at the ballot box (Pryne 2005). Research could be done on how such a tax would affect the elasticity of demand of new home buyers. It may be more politically feasible to rely on impact fees for new developments rather than trying to garner support for a new tax, particularly given the nature of Oregon laws in regards to the creation of new taxes.

Land and Water Conservation Fund

Established by Congress in 1964, the Land and Water Conservation Fund (LWCF) is used by federal, state, or local governments to acquire lands, wetland, and water rights for the benefit of the public. LWCF gets most of its money from fees charged for offshore oil and gas drilling. Though it may be a minor point, the fact that the funds are derived from regulation is of note for the purposes of this research.

Land exchanges

Government agencies have long used this mechanism for consolidating the most important habitats and transferring less-vital lands into private ownership. Frequently criticized on the basis of the decision of what to acquire and what to dispose of, the establishment of fair market values can also become contentious. That said, given the shortage of funds for outright purchases, land exchanges are useful.

Land exchanges are typically brokered by a non-profit land trust. The land trust ideally signs bargain sale option agreements with the willing sellers of lands to be conserved and finds private buyers for government surplus lands. The non-profit covers its overhead costs by purchasing conservation land for less than fair market value (in the case of a bargain sale). The land owner may claim the difference between the fair market value and the sale price as a charitable contribution. The land trust also attempts to sell the surplus government lands for more than the appraised value. The latter part of the transaction is what frequently makes land exchanges controversial though it is necessary in order for the land trust to remain solvent.

What works?

Many of the voluntary or quasi-regulatory planning tools explored herein offer great promise. Most have been used with success either in Oregon or elsewhere. However, even the most successful of these tools are no substitute for a coordinated statewide approach that relies on regulation when necessary (Nelson, 1992). With diminished reliance on regulation, it can be said with a degree of certainty that the natural character of Oregon will be harmed. This is not only a concern for those who consider themselves environmentalists, but also those who value clean air and water. Even the most pragmatic of Oregonians who simply wish to lower property taxes and maintain the value of real estate investments should be concerned about the implications of Measure 37. What has also become clear is that regulations are not the best

solution for all land use problems. Oregonians may need to consider a more flexible approach to land use planning that uses regulations when necessary, but relies on the free-market when possible.

Achieving Oregon's Statewide Planning Goals

In considering any land use planning instruments, we must have a frank discussion about whether they are able to accomplish Oregon's Statewide Planning Goals. If non-regulatory instruments are incapable of achieving these Goals and we have no tolerance for regulation, it would seem that we don't truly believe in the importance of the Statewide Planning Goals. Given the evidence that Oregonians do, in fact, still subscribe to the fundamental ideals of the Statewide Planning Goals, we must address the perceived inequities of the planning system and re-engage the public in a discussion of why regulations are sometimes necessary and how they are for the common good.

Any discussion about the Statewide Planning Goals and the means thereto needs to be on-going. Public participation in this deliberative process is critical to its success. Only through such on-going discussions will we begin to transcend the overly-simplistic arguments about fairness and appreciate the real issue of the common good and how to achieve it. It is perhaps useful to look at several pertinent Statewide Planning Goals through the lens of regulatory vs. non-regulatory planning instruments. Below is a discussion of the goals which are more overtly connected to land use decisions in the Portland region.

Statewide Planning Goal 1 – Citizen Involvement

“To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.”

A fundamental drawback of reducing reliance on regulatory instruments is that citizen involvement is also severely curtailed. Non-regulatory instruments typically have little use for public participation. In such a system, decisions are made by individuals and the private market.

The ability to voice concerns and effectuate change would be limited by the contents of one's pocketbook. Because land use decisions have profound implications for all Oregonians, a lack of public participation is cause for great concern. Regulation, despite its current bad reputation, is the surest means of approximating the common good through deliberative public involvement.

Statewide Planning Goal 2 – Land Use Planning

“To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions.”

The most significant shortcoming of non-regulatory instruments is that since they rely on individual willingness to participate, their use is typically opportunistic. Thus, they do not involve a landscape-wide planning process as we know it. Absent regulation, programs and incentives are used *when possible* instead of *when needed*, failing to achieve the Goals' intended consistency and coordination in land use planning.

Goal 3 – Agricultural Lands

“To preserve and maintain agricultural lands.”

Many of the instruments discussed herein could be used in achieving the goals of a program to preserve and maintain agricultural lands. The difficulty of relying on non-regulatory methods is the risk that such a program will lack the aforementioned consistency. Agriculture functions best as an agglomeration economy, whereby farms benefit from economies of scale and avoid conflicts with other (residential) land uses. The decision of one farmer to subdivide her property will likely have negative repercussions for all nearby farms.

Exclusive Farm Use (EFU) zoning provides consistency and predictability to farmers, sending a clear signal to the market that development is not possible. Other instruments discussed herein (such as conservation easements) provide added protection, compensation to

farm owners, and property tax relief (though Oregon, unlike most states, defers taxes in EFU zones) that complement EFU designations.

Goal 4 – Forest Lands

“To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture.”

The movement of Oregon's economy away from extractive industries necessitates new means of deriving sufficient profits from forest lands. Statewide Planning Goal 4 relies on zoning in order to retain lands in forest use. Zoning itself is not problematic if used in conjunction with other programs/instruments that provide a means of forest profitability. Ideally, such programs encourage sustainable practices. Significant work is being done to develop new economies in the state's privately-owned forests. Such programs include carbon banking and the local manufacture of value-added timber products out of small diameter trees. The use of small diameter trees has the added benefit of reducing the high fuel loads (due to years of fire suppression and unsustainable logging practices) that have contributed to the catastrophic wildfires of recent years.

Goal 5 – Natural Resources, Scenic and Historic Areas, and Open Spaces

“To protect natural resources and conserve scenic and historic areas and open spaces.”

This Goal is one of the primary focuses of this paper. As has been discussed, regulatory and non-regulatory tools may be used towards the furtherance of the Goal, but regulations provide the most consistency and coordinated approach to protection. Absent such regulations, open space and habitat will be lost despite the use of non-regulatory tools.

Goal 6 - Air, Water, and Land Resources Quality

“To maintain and improve the quality of the air, water and land resources of the state.”

The choices that the Metro region makes in shaping its urban form have enormous impact on air, water, and land resources quality. Many aspects of this goal are beyond the scope of this paper. However, it can be said that attainment of this Goal is best achieved through the deliberate creation of a compact urban form that is less reliant on automobiles. Given the focus of this paper, the components of this Goal are discussed at greater length below, under Goal 14, Urbanization.

Goal 8 – Recreational Needs

“To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.”

Goal 8 lends itself to non-regulatory approaches to land use planning. Furtherance of this Goal, as it affects private landowners, largely consists of the public purchase of land from willing sellers.

Goal 13 – Energy Conservation

“Land and uses developed on the land shall be managed and controlled so as to maximize the conservation of all forms of energy, based upon sound economic principles.”

As with Goal 6, since this paper is concerned with land use, this Goal is best addressed below in Goal 14, Urbanization.

Goal 14 – Urbanization

“To provide for an orderly and efficient transition from rural to urban land use, to accommodate urban population and urban employment inside urban growth boundaries, to ensure efficient use of land, and to provide for livable communities.”

The urban form that Portland assumes in the future will largely determine the outcomes of a number of the aforementioned Statewide Planning Goals in the Portland region. The successful implementation of policies to further this Goal is essential to the preservation of farmland, forest land, habitat, and energy, and the maintenance of air and water quality. The

success of Portland in promoting a compact urban form stands in stark contrast to the majority of American cities. Underlying this success is the use of the urban growth boundary. While many of the non-regulatory and hybrid land use planning instruments considered herein can help to further Goal 14, they are no substitute for the use of the UGB. Short of public acquisition of all surrounding greenbelt lands (which would not really qualify as growth management, so much as it would be a zero growth policy), the UGB is the most effective means of providing a framework for an efficient conversion of rural land to urban uses.

However, it should be emphasized that the UGB can not accomplish Goal 14 on its own. As Porter points out, “growth boundaries should build on and logically link to comprehensive planning policies, zoning requirements, and infrastructure programs, rather than substitute for adequate planning.” (Porter, 1997) Additionally, I would include all of the instruments discussed herein as complements to the UGB.

Goal 15 – Willamette River Greenway

“To protect, conserve, enhance and maintain the natural, scenic, historical, agricultural, economic and recreational qualities of lands along the Willamette River as the Willamette River Greenway.”

The text of this goal envisions that it will be furthered largely through ordinances, rules, regulations, and permits. A non-regulatory approach to achieving the Goal is the public acquisition of lands along the river. Clearly, this is not feasible in all or even a majority of cases, necessitating reliance on regulations or quasi-regulatory means. One such quasi-regulatory means is being pursued by the Willamette Partnership, wherein developers and others that are required to mitigate habitat destruction may purchase conservation credits that go towards the restoration of the Willamette’s ecosystem. The initial focus of the program is efforts which help to reduce water temperatures in the Willamette that have increased as a result of tree canopy loss.

Instrument effectiveness and feasibility

As discussed in the context of the Statewide Planning Goals, many of the instruments presented herein are worth considering, but they are not a panacea. Following is a matrix (Table 3) which attempts to summarize some of the main land use planning tools. The instruments are measured according to: administrative/implementation difficulty and costs, who bears the direct costs, effectiveness in achieving environmental protection, and symbolic value (does the instrument emphasize personal liberty or security in achieving goals?) (Ozawa 2006).

Table 3 – Assessment of policy instruments

	Type	Administrative costs/difficulty	Who bears direct costs?	Effectiveness	Symbolic value
Zoning	regulation	moderate	ambiguous	high	security
Urban growth boundary	regulation	high	ambiguous	high	security
Mitigation bank	economic disincentive	moderate	developer	ambiguous	liberty
Transferable development rights	compensation for regulation	high	developer (in receiving area)	ambiguous	liberty
Value capture tax	regulation	moderate	private landowners (though they also benefit from UGB inclusion)	high (as a source of funding)	liberty
Conservation incentives & subsidies	incentive	low	public	ambiguous	liberty
Fee title purchase	public sector production	high	public	high (depending on willing sellers)	security & liberty
Conservation easement	public sector production	high	public or non-profit agency	high (depending on willing sellers)	security & liberty

What begins to emerge from the above matrix and the preceding analysis is that regulation provides the highest degree of certainty of conserving agricultural and open space lands. Though such regulations are not without costs, it is overly-simplistic to claim that those subject to regulation bear all of the costs and receive none of the benefits. Though some of the incentive or market-based approaches to conservation hold promise, they are, by nature, insufficiently reliable in ensuring the needed outcomes to meet our Statewide Planning Goals. Complete reliance on such instruments would make strategic conservation difficult and result in piecemeal results.

The fairness issue

If we are to continue to rely on regulations, the Metro region will need to contend with the issues of who receives the benefits and who receives the burdens of regulation. In those cases where a Measure 37 claim is filed, it may be useful for the state to consider a more sophisticated system of determining the impacts of regulations and public policies on real property values. Such a system will be complex and will require great expertise to develop, but is warranted given the alternative of accepting claims at face value and either waiving the regulation or paying the requested amount with no real consideration of the validity of the dollar amount.

Only through this process will we begin to truly appreciate that a lack of regulation is the greatest threat to property values and fairness. This process may determine that some landowners are bearing the brunt of regulations that benefit others, it may infuriate some, but at least it will begin a more honest discussion of why we engage in long-term land use planning and why the Statewide Planning Goals remain relevant.

Additional Topics to Explore:

Fairness tribunals: The State needs to develop expertise in assessing the value lands in regards to regulations and infrastructure. This type of expertise would provide for a more nuanced response to claims of regulatory takings.

Societal pressure to conserve: Uphoff and Langholz (1998) illustrate the importance of societal pressures in the success of ecosystem conservation. Private conservation efforts in Costa Rica have been undertaken in the absence of stringent legal requirements and with only nominal economic incentives (Uphoff and Langholz 1998). Efforts to engender a wide-spread environmental ethic are of the utmost importance for the long-term success of any regulatory or non-regulatory planning program.

Premium pricing for sustainably harvested wood or wild-caught fish: Similar in concept to labeling for organic foods, the further promotion of sustainably harvested, manufactured, or caught goods may provide a positive incentive for sustainable land management practices. The Forestry Stewardship Council (FSC) has designed such a system for sustainably harvested wood. The organization, Salmon Safe, has created a system for certifying farms which utilize agricultural techniques that are compatible with salmon habitat conservation.

Subsidies for sustainable agriculture - Given the huge subsidies for commodity-type farming, should we be considering subsidies for small-scale farming as a means of making such practices more competitive and thus increasing potential profits for EFU lands?

Non-regulatory planning tools to encourage the provision of affordable housing: Many of the same mechanisms that could provide for affordable housing may also work for land conservation and vice versa.

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